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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/777,365

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Christopher A. Meek

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EXAMINER

KIM, PAUL

ART UNIT

PAPER NUMBER

2161

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/777,365

Applicant(s)

MEEK ET AL.

Examiner

Paul Kim

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 38-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 38-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office action is responsive to the following communication: Amendment filed on 6 December 2006.
2. Claims 1-9 and 38-48 are pending and present for examination. Claims 1, 38 and 47 are independent.

Response to Amendment

3. Claims 1 and 8 have been amended.
4. Claims 38-48 have been added.
5. Claims 10-37 have been cancelled.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
7. **Claims 1-9 and 38-48** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
 - a. Claims 1-9 recite a system comprising a managing component and a web-crawling component. As disclosed by the Applicant's specification, "the term 'component' is intended to refer to a computer-related entity, either hardware, a combination of hardware and software, software, or software in execution" (See Specification, [0057]). Accordingly, the components may be considered to be software, per se, and therefore is non-statutory subject matter since they fail to fall within a statutory category.

Additionally, the claims are directed toward a system comprising a managing component that comprises a determination "if, when, and how to perform web-crawling," and are non-

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statutory because they do not encompass tangible subject matter and/or embodiments which fall within a statutory category. That is, wherein the determination may result in the non-performance of a web-crawling, there would be no "useful, concrete, and tangible result." See State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. MPEP 2106. "The claimed invention as a whole must accomplish a practical application. That is, it must produce a 'useful, concrete and tangible result' " (emphasis added).

b. Claims 1-9 and 38-46 are non-statutory because the performance of a "predictive analysis" fails to yield a "useful, concrete, and tangible result." The claims fail to recite an objective standard used by the predictive analysis whereby a concrete result would occur. That is, while claims 4 and 41 recite the maximization of a value, the claims fail to provide how the maximized value is integrated into the claimed invention such that the maximized value affects when and how a web-crawling is performed.

c. Claims 47-48 recite a system with a plurality of "means for" functions. Accordingly, said "means for" functions are directed to software, per se, and therefore is non-statutory subject matter since said functions fail to fall within a statutory category.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 1-2 and 5-9** are rejected under 35 U.S.C. 102(e) as being anticipated by Squillante et al (USPGPUB 2004/0225644, hereinafter referred to as SQUILLANTE), filed on 9 May 2003, and issued on 11 November 2004.

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10. **As per independent claim 1, SQUILLANTE teaches:**

A system that facilitates web-crawling comprising:

a managing component that performs a predictive analysis to predict when a web page will change, in order to determine if, when, and how to perform web-crawling {See SQUILLANTE, [0029], wherein this reads over "[a] crawler optimizer determines an optimal number of crawls for each Web page over a fixed period of time called a scheduling interval, as well as determining the theoretically optimal (ideal) crawl times themselves"}; and

a web-crawling component that crawls subsets of web pages as a function of the predictive analysis, to discover and update the pages in a catalogue of possible search results {See SQUILLANTE, [0006], wherein this reads over "[a] crawler visits Web pages on various Web sites"}.

11. **As per dependent claim 2, SQUILLANTE teaches:**

The system of claim 1, further comprising a decision-theoretic component that makes predictions regarding changes in at least one web page to determine an appropriate time to crawl the at least one web page {See SQUILLANTE, [0081]-[0087], wherein this reads over "to optimally schedule the current scheduling interval using some information from the last one"}.

12. **As per dependent claim 5, SQUILLANTE teaches:**

The system of claim 1, the predictive analysis is based at least in part on the utility of the at least one web page {See SQUILLANTE, [0040], wherein this reads over "the weights w_i will determine the relative importance of each Web page i ."}.

13. **As per dependent claim 6, SQUILLANTE teaches:**

The system of claim 1, the predictive analysis is based at least in part on historical data related to the at least one web page {See SQUILLANTE, [0081]-[0087], wherein this reads over "to optimally schedule the current scheduling interval using some information from the last one"}.

14. **As per dependent claim 7, SQUILLANTE teaches:**

The system of claim 1, the predictive analysis is based at least in part on content contained in the at least one web page {See SQUILLANTE, [0047], wherein this reads over "it is determined whether the Web page is fully stochastic (denoted FX) or quasi-deterministic (denoted QD). Then, in either step 204 or step 205, the appropriate computation for A_i is accomplished. These steps differ depending on the type of Web page"}.

15. **As per dependent claim 8, SQUILLANTE teaches:**

The system of claim 1, further comprising a bundling component that rearranges crawled web pages into new subsets according to the utility of the web pages {See SQUILLANTE, [0082], wherein this reads over "best schedule the crawls over a scheduling interval of length T "¹}.
¹ The Examiner notes that the crawled web pages may be arranged into subsets wherein the subsets correspond to the time interval at which the web pages are next crawled.

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16. **As per dependent claim 9, SQUILLANTE teaches:**

The system of claim 1, the web-crawling component comprises a Round Robin crawling component that sequentially crawls web pages in a subset and ensures that every web page will be crawled within a crawling period {See SQUILLANTE, [0029], wherein this reads over "[a] crawler optimizer determines an optimal number of crawls for each Web page over a fixed period of time called a scheduling interval, as well as determining the theoretically optimal (ideal) crawl times themselves"}, and a (Greedy crawling component that non-sequentially crawls pages according to a score associated with each page {See SQUILLANTE, [0057]-[0073], wherein this reads over "Purely Stochastic Case", "Quasi-Deterministic Case" and "a typical staleness probability function"}.

Response to Arguments

17. Applicant's arguments filed 6 December 2006 have been fully considered but they are not persuasive.

a. 35 U.S.C. 101 Rejections

i. Applicant's Arguments:

Applicant asserts the argument that the claimed invention is statutory since they do encompass tangible subject matter.

ii. Response to Arguments:

Applicants asserted arguments are moot in view of Applicant's Amendments. The addition of the claim limitation, "to discover and update the pages in a catalogue of possible search results," suffice in overcoming the "useful, concrete, and tangible result" requirement as set forth by *State Street Bank & trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed Cir. 1998). However, the said claims remain non-statutory because they are software, per se, as seen in the above 35 U.S.C. 101 rejections.

b. 35 U.S.C. 102(e) Rejections

iii. Applicant's Arguments:

Applicant asserts the argument that Squillante et al. does not disclose or suggest "the aspects of the claimed management component or the web-crawling component" (See Amendment, page 8).

iv. Response to Arguments:

As per Applicant's assertion that Squillante et al does not disclose or suggest "the aspects of the claimed management component," the Examiner disagrees. It is noted, as cited in the previous Office action dated 6 September 2006, that Squillante et al discloses "[a] crawler optimizer . . . determine[es] the theoretically optimal (ideal) crawl times themselves" {See Squillante, [0029]}. Therefore, one of ordinary skill in the art at the time the invention was made would be able to readily discern that the Squillante prior art reference indeed does disclose the performance of a "predictive analysis to predict when a web page will change" since the crawls are scheduled according to when a web page is updated.

As per Applicant's assertion that Squillante et al does not disclose or suggest "the web-crawling component," the Examiner disagrees. It is noted, as cited in the previous Office action dated 6 September 2006, that Squillante discloses a crawler which visit Web pages. Furthermore, it would be inherent to the claimed invention to have a web-crawling component since said web-crawling component is necessary to retrieve the data necessary for the predictive analysis. That is, where the predictive analysis is dependent on changes made to a Web page, it would be necessary for the claimed invention to comprise a web-crawling component which traversed or crawled the various Web pages to retrieve whether or not updates had been made to a Web page.

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH

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shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is (571) 272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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